CLAIMS:

1. A method of generating motion blur in a graphics system, the method comprising:

receiving (RA; RSS; RTS) geometrical information (GI) defining a shape of a graphics primitive (SGP,TGP),

providing (DIG) displacement information (DI) determining a displacement vector (SDV;TDV) defining a direction of motion of the graphics primitive (SGP; TGP),

sampling (RA; RSS; RTS) the graphics primitive (SGP; TGP) in the direction indicated by the displacement vector (SDV;TDV) to obtain input samples (RPi; RIi), and

one dimensional spatial filtering (ODF) of the input samples (RPi; RIi) to obtain temporal pre-filtering.

2. A method as claimed in claim 1, wherein the step of providing (DIG) displacement information (DI) further defines an amount of motion of the graphics primitive (SGP; TGP), and wherein the step of one dimensional spatial filtering (ODF) is arranged to obtain the temporal pre-filtering with a size of a filter footprint (FP) that depends on the magnitude of the displacement vector (SDV;TDV).

3. A method as claimed in claim 1, wherein the displacement vector (SDV;TDV) is supplied by a 2D or a 3D application.

4. A method as claimed in claim 1, wherein the step of providing (DIG) displacement information (DI) receives a model-view transformation matrix from a 2D or a 3D application, said matrix defining the position and orientation of the graphics primitive (SGP; TGP) of a previous frame.

5. A method as claimed in claim 1, wherein the step of providing (DIG) displacement information (DI) buffers a position and an orientation of the graphics primitive (SGP; TGP) of a previous frame to calculate the displacement vector (SDV;TDV).

6. A method as claimed in claim 1, wherein

the graphics system is arranged for displaying pixels (Pi) having a pixel intensity (PIi) on a display screen (DS), the pixels (Pi) being positioned on pixel positions (x,y) in a screen space (SSP),

the step of sampling (RA; RSS; RTS) is adapted for sampling (RSS) in the screen space (SSP) in a direction of a screen displacement vector (SDV) being the displacement vector mapped to the screen space (SSP) to obtain resampled pixels (RPi),

the method further comprises an inverse texture mapping (ITM) receiving coordinates of the resampled pixels (RPi) to supply intensities (RIp) of the resampled pixels (RPi),

the step of one dimensional spatial filtering (ODF) comprises averaging (AV) of the intensities (RIp) of the resampled pixels (RPi) to obtain averaged intensities (ARIp) in accordance with a weighting function (WF),

the method further comprises a resampling (RSA) of the averaged intensities (ARIp) of the resampled pixels (RPi) to obtain the pixel intensities (PIi).

7. A method as claimed in claim 1, wherein

the graphics system is arranged for displaying pixels (Pi) having a pixel intensity (PIi) on a display screen, the pixels (Pi) being positioned on pixel positions (x,y) in a screen space (SSP),

the method further comprises providing appearance information (TA, TB) defining an appearance of the graphics primitive (SGP) in the screen space (SSP) by defining texel intensities (Ti) in a texture space (TSP),

the step of sampling (RA; RSS; RTS) is adapted for sampling (RTS) in the texel space (TSP) in a direction of a texel displacement vector (TDV) being the displacement vector mapped to the texel space (TSP) to obtain resampled texels (RTi),

the method further comprising interpolating (IP) the texel intensities (Ti) to obtain intensities (RIi) of the resampled texels (RTi),

the step of one dimensional spatial filtering (ODF) comprises averaging (AV) the intensities (RIi) of the resampled texels (RTi) in accordance with a weighting function (WF) to obtain filtered texels (FTi),

the method further comprises:

mapping (MSP) the filtered texels (FTi) of the graphics primitive (TGP) in the texture space (TSP) to the screen space (SSP) to obtain mapped texels (MTi),

determining (CAL) intensity contributions from a mapped texel (MTi) to all the pixels (Pi) of which a corresponding pre-filter footprint (PFP) of a pre-filter (PRF) covers the mapped texel (MTi), the contribution being determined by an amplitude characteristic of the pre-filter (PRF), and

summing (CAL) the intensity contributions of the mapped texel (MTi) for each pixel (Pi).

8. A method as claimed in claim 6 or 7, wherein at least a direction of the displacement vector (SDV;TDV) of the graphics primitive (GP) is an average of directions of displacement vectors of vertices of the graphics primitive.

9. A method as claimed in claim 6, wherein the step of one dimensional filtering (ODF) comprises:

distributing, in the screen space (SSP), the intensities (RIp) of the resampled pixels (RPi) in a direction of the displacement vector (SDV) over a distance determined by a magnitude of the displacement vector (SDV) to obtain distributed intensities (DIi), and

averaging overlapping distributed intensities (DIi) of different pixels (Pi) to obtain a piece-wise constant signal being the averaged intensities (ARPi).

10. A method as claimed in claim 7, wherein the step of one dimensional filtering (ODF) comprises:

distributing, in the texture space (TSP), the intensities (RIi) of the resampled texels (RTi) in a direction of the displacement vector (TDV) over a distance determined by a magnitude of the displacement vector (TDV) to obtain distributed intensities (TDIi), and

averaging overlapping distributed intensities (TDIi) of different resampled texels (RTi) to obtain a piece-wise constant signal being the filtered texels (FTi).

11. A method as claimed in claim 7, wherein the step of one dimensional spatial filtering (ODF) is arranged for applying a weighted averaging function (WF) during at least one frame-to-frame interval.

12. A method as claimed in claim 9 or 10, wherein the distance is rounded to a multiple of the distance (DIS) between resampled texels (RTi).

13. A method as claimed in claim 1, wherein

the graphics system is arranged for displaying pixels (Pi) having a pixel intensity (PIi) on a display screen, the pixels (Pi) being positioned on pixel positions (x,y) in a screen space (SSP),

the method further comprises the step of providing appearance information (TA, TB) defining an appearance of the graphics primitive (SGP) in the screen space (SSP) by defining texel intensities (Ti) in a texture space (TSP),

the step of sampling (RA; RSS; RTS) is adapted for sampling (RTS) in the texel space (TSP) in a direction of a texel displacement vector (TDV) being the displacement vector mapped to the texel space (TSP) to obtain resampled texels (RTi),

the method further comprising interpolating (IP) the texel intensities (Ti) to obtain intensities (RIi) of the resampled texels (RTi),

the step of one dimensional spatial filtering (ODF) comprises

subdividing the displacement vector (TDV) in a predetermined number of segments () to obtain segment displacement vectors (STDV), and for each one of the segments ():

distributing, in the texture space (TSP), the intensities (RIi) of the resampled texels (RTi) with a direction, a position and a magnitude according to an associated one of the segment displacement vectors (STDV) to obtain averaged overlapping distributed intensities (TDIi) of different resampled texels (RTi) to obtain a piece-wise constant signal being the motion blurred filtered texels (FTi),

the method further comprises for each one of the segments ():

mapping (MSP) the filtered texels (FTi) of the graphics primitive (TGP) in the texture space (TSP) to the screen space (SSP) to obtain mapped texels (MTi),

determining (CAL) intensity contributions from a mapped texel (MTi) to all the pixels (Pi) of which a corresponding pre-filter footprint (PFP) of a pre-filter (PRF) covers the mapped texel (MTi), the contribution being determined by an amplitude characteristic of the pre-filter (PRF), and

summing (CAL) the intensity contributions of the mapped texel (MTi) for each pixel (Pi).

14. A graphics computer system comprising:

means for receiving (RA; RSS; RTS) geometrical information (GI) defining a shape of a graphics primitive (SGP,TGP),

means for providing (DIG) displacement information (DI) determining a displacement vector (SDV;TDV) defining a direction of motion of the graphics primitive (SGP; TGP),

means for sampling (RA; RSS; RTS) the graphics primitive (SGP; TGP) in the direction indicated by the displacement vector (SDV;TDV) to obtain input samples (RPi; RIi), and

means for one dimensional spatial filtering (ODF) of the input samples (RPi; RIi) to obtain temporal pre-filtering.